

Appl. No. 10/828,533
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Reply to Office action of February 08, 2006

Amendments to the Claims:

This listings of claims will replace all prior variations and listings of claims in the application:

Listing of Claims:

1 Claim 1 (original). A port security barrier system for protecting
2 a port facility from a waterborne craft laden with explosives,
3 said port security barrier system comprising:

4 (a) a plurality of port security barrier modules
5 connected to one another to form a floating security barrier
6 for said port facility having a length from about two
7 hundred feet to about one mile;

8 (b) a plurality of mooring buoys, each of said
9 plurality of mooring buoys being disposed between an
10 adjacent pair of said port security barrier modules and
11 connected to each of the adjacent pair of said port security
12 barrier modules, said mooring buoys maintaining said port
13 security barrier modules in a fixed position relative to
14 said port facility to insure that said port facility is
15 protected from said waterborne craft;

16 (c) each of said port security barrier modules

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17 including:

18 (i) a longitudinal strength member;

19 (ii) a generally rectangular shaped capture net

20 extending vertically upward from said longitudinal strength

21 member, said capture net having a length approximately the

22 same as the length of said longitudinal strength member, and

23 a height which is sufficient to prevent said waterborne

24 craft from penetrating said port facility;

25 (iii) a net support structure extending vertically

26 upward from said longitudinal strength member, said net

27 support structure being attached to said longitudinal

28 strength member, said net support structure having said

29 capture net attached thereto;

30 (iv) a plurality of pontoons attached to said

31 longitudinal strength member and orientated perpendicular to

32 said longitudinal strength member, said pontoons for each of

33 said port security barrier modules keeping said port

34 security barrier system afloat in a seawater environment;

35 and

36 (v) an anti-kayak guard positioned below and attached

37 to said longitudinal strength member, said anti-kayak guard

38 preventing small watercraft from slipping under said port

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39 security barrier system into said port facility.

1 Claim 2 (original). The port security barrier system of claim 1
2 wherein each of said plurality of mooring buoys has one end of a
3 mooring line connected thereto, said mooring line having at least
4 two branches, each of the branches of said mooring line having an
5 anchor connected thereto.

1 Claim 3 (original). The port security barrier system of claim 1
2 wherein said capture net has a mesh structure, said mesh
3 structure having a one foot square mesh size comprising
4 horizontal boat stopping members consisting of a 1.125 inch
5 diameter 12-Strand Braided nylon rope and vertical boat stopping
6 members consisting of 0.75 inch diameter 12-Plait nylon, the
7 horizontal boat stopping members of said capture net being
8 interlaced with the vertical boat stopping members of said
9 capture net to form the mesh structure of said capture net.

1 Claim 4 (original). The port security barrier system of claim 3
2 wherein said capture net has a height of approximately eight feet
3 and a width of approximately fifty two feet.

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1 Claim 5 (original). The port security barrier system of claim 3
2 wherein said capture net is fabricated from nylon to absorb
3 energy from a waterborne craft which engages said capture net,
4 said waterborne craft when engaging said capture net traveling at
5 speeds of up to 52 knots and having a weight of around 10,000
6 pounds.

7
8 Claim 6 (original). The port security barrier system of claim 1
9 wherein said plurality of pontoons comprise three pontoons, a
10 first and a second of said three pontoons being positioned at
11 each end of said longitudinal strength member and a third of said
12 three pontoons being position at the center of said longitudinal
13 strength member, the first and the second of said three pontoons
14 having an equal length, and the third of said three pontoons
15 having a substantially greater length than the first and the
16 second of said three pontoons.

1 Claim 7 (original). The port security barrier system of claim 1
2 wherein said longitudinal strength member includes connector
3 elements positioned at each end of said longitudinal strength
4 member, said connector elements allowing a user of said port
5 security barrier system to connect each of said port security

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6 barrier modules to adjacent port security barrier modules.

1 Claim 8 (original). The port security barrier system of claim 7
2 wherein one of said port security barrier modules operates as a
3 gate, the connector elements of the one of said port security
4 barrier modules operating as said gate
5 allowing said user to open and close the one of said port
6 security barrier modules operating as said gate.

1 Claim 9 (original). The port security barrier system of claim 1
2 wherein said net support structure comprises:

3 first, second and third net support members attached
4 to said longitudinal strength member, said first,
5 second and third net support members extending
6 vertically upward from said longitudinal strength
7 member, said first net support member being positioned
8 at one end of said longitudinal strength member, said
9 second net support member being positioned at other end
10 of said longitudinal strength member and said third net
11 support member being positioned at the center of said
12 longitudinal strength member;
13 a first angled support brace, said first angled support

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14 brace having one end attached to the bottom end of said
15 first net support member and the other end attached
16 near the top end of said third net support member; and
17 a second angled support brace, said second angled
18 support brace having one end attached to the bottom end
19 of said second net support member and the other end
20 attached near the top end of said third net support
21 member.

1 Claim 10 (original). The port security barrier system of claim 9
2 further comprising a warning light located near the top end of
3 said third net support member and a light support bracket
4 attached to said net support member, said light support bracket
5 being mounted on said light support bracket.

1 Claim 11 (currently amended). The port security barrier system
2 of claim 9 further comprising:

3 a third angled support brace having one end attached to
4 the top end of said first net support member and the
5 other end attached to a first of said plurality of
6 pontoons;

7 a fourth angled support brace having one end attached to

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8 the top end of said second net support member and the
9 other end attached to a second of said plurality of
10 pontoon; and
11 a fifth angled support brace having one end attached to the
12 top end of said third net support member and the other
13 end attached to a third of said plurality of pontoons.

1 Claim 12 (original). A port security barrier system for
2 protecting a port facility from a waterborne craft laden with
3 explosives, said port security barrier system comprising:
4 (a) a plurality of port security barrier modules
5 connected to one another to form a floating security barrier
6 for said port facility having a length from about two
7 hundred feet to about one mile;
8 (b) a plurality of mooring buoys, each of said
9 plurality of mooring buoys being disposed between an
10 adjacent pair of said port security barrier modules and
11 connected to each of the adjacent pair of said port security
12 barrier modules, said mooring buoys maintaining said port
13 security barrier modules in a fixed position relative to
14 said port facility to insure that said port facility is
15 protected from said waterborne craft;

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16 (c) each of said port security barrier modules
17 including:
18 (i) a longitudinal strength member;
19 (ii) a generally rectangular shaped capture net
20 extending vertically upward from said longitudinal strength
21 member, said capture net having a length approximately the
22 same as the length of said longitudinal strength member, and
23 a height which is sufficient to prevent said waterborne
24 craft from penetrating said port facility, said capture net
25 having a mesh structure, said mesh structure having a one
26 foot square mesh size comprising horizontal boat stopping
27 members consisting of a 1.125 inch diameter 12-Strand
28 Braided nylon rope and vertical boat stopping members
29 consisting of 0.75 inch diameter 12-Plait nylon, the
30 horizontal boat stopping members of said capture net being
31 interlaced with the vertical boat stopping members of said
32 capture net to form the mesh structure of said capture net;
33 (iii) a net support structure extending vertically
34 upward from said longitudinal strength member, said net
35 support structure being attached to said longitudinal
36 strength member, said net support structure having said
37 capture net attached thereto;

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38 (iv) a first pontoon, a second pontoon and a third
39 pontoon orientated perpendicular to said longitudinal
40 strength member and attached thereto, said first pontoon
41 being positioned at each one end of said longitudinal
42 strength member, said second pontoon being positioned at the
43 opposite end of said longitudinal strength member and said
44 third pontoon being position at the center of said
45 longitudinal strength member, said first pontoon and said
46 second pontoon having an equal length, and said third
47 pontoon having a substantially greater length than said
48 first pontoon and said second pontoon, said first pontoon,
49 said second pontoon and said third pontoon for each of said
50 port security barrier modules keeping said port security
51 barrier system afloat in a seawater environment; and
52 (v) an anti-kayak guard positioned below and attached
53 to said longitudinal strength member, said anti-kayak guard
54 preventing small watercraft from slipping under said port
55 security barrier system into said port facility.

1 Claim 13 (original). The port security barrier system of claim
2 12 wherein each of said plurality of mooring buoys has one end of
3 a mooring line connected thereto, said mooring line having at

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4 least two branches, each of the branches of said mooring line
5 having an anchor connected thereto.

1 Claim 14 (original). The port security barrier system of claim 12
2 wherein said capture net has a height of approximately eight feet
3 and a width of approximately of fifty two feet.

1 Claim 15 (original). The port security barrier system of claim
2 12 wherein said capture net is fabricated from nylon to absorb
3 energy from a waterborne craft which engages said capture net,
4 said waterborne craft when engaging said capture net traveling at
5 speeds of up to 52 knots and having a weight of around 10,000
6 pounds.

1 Claim 16 (original). The port security barrier system of claim
2 12 wherein said longitudinal strength member includes connector
3 elements positioned at each end of said longitudinal strength
4 member, said connector elements allowing a user of said port
5 security barrier system to connect each of said port security
6 barrier modules to adjacent port security barrier modules.

1 Claim 17 (original). The port security barrier system of claim

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16 wherein one of said port security barrier modules operates as a gate, the connector elements of the one of said port security barrier modules operating as said gate allowing said user to open and close the one of said port security barrier modules operating as said gate.

Claim 18 (currently amended). The port security barrier system of claim 12 wherein said net support structure comprises:

first, second and third net support members attached to said longitudinal strength member, said first, second and third net support members extending vertically upward from said longitudinal strength member, said first net support member being positioned at one end of said longitudinal strength member, said second net support member being positioned at other end of said longitudinal strength member and said third net support member being positioned at the center of said longitudinal strength member;

a first angled support brace, said first angled support brace having one end attached to the bottom end of said first net support member and the other end attached near the top end of said third net support member;

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17 a second angled support brace, said second angled
18 support brace having one end attached to the bottom end
19 of said second net support member and the other end
20 attached near the top end of said third net support
21 member;
22 a third angled support brace having one end attached to
23 the top end of said first net support member and the
24 other end attached to said first pontoon;
25 a fourth angled support brace having one end attached to
26 the top end of said second net support member and the
27 other end attached to said second pontoon; and
28 a fifth angled support brace having one end attached to the
29 top end of said third net support member and the other
30 end attached to said third pontoon.

1 Claim 19 (original). The port security barrier system of claim
2 18 further comprising a warning light located near the top end of
3 said third net support member and a light support bracket
4 attached to said net support member, said light support bracket
5 being mounted on said light support bracket.

1 Claim 20 (original). The port security barrier system of claim

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2 12 wherein each of said port security barrier modules has a tow
3 brace assembly for providing stability for said port security
4 barrier module when said port security barrier module is being
5 towed at sea, said port security barrier module having first and
6 second towing braces, said first towing brace having one end
7 attached to the center of said first pontoon and the opposite end
8 attached to the rear of said third pontoon and said second towing
9 brace having one end attached to the center of said second
10 pontoon and the opposite end attached to the rear of said third
11 pontoon.

1 Claim 21 (previously presented). A port security barrier system
2 for protecting a port facility from a waterborne craft laden with
3 explosives, said port security barrier system comprising:

4 (a) a plurality of port security barrier modules connected
5 to one another to form a floating security barrier for said
6 port facility having a length from about two hundred feet to
7 about one mile;

8 (b) a plurality of mooring buoys, each of said plurality of
9 mooring buoys being disposed between an adjacent pair of
10 said port security barrier modules and connected to each of
11 the adjacent pair of said port security barrier modules,

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12 said mooring buoys maintaining said port security barrier
13 modules in a fixed position relative to said port facility
14 to insure that said port facility is protected from said
15 waterborne craft;

16 (c) each of said port security barrier modules including:

17 (i) a longitudinal strength member;

18 (ii) a generally rectangular shaped capture net extending
19 vertically upward from said longitudinal strength member,
20 said capture net having a length approximately the same as
21 the length of said longitudinal strength member, and a
22 height which is sufficient to prevent said waterborne craft
23 from penetrating said port facility;

24 (iii) a net support structure extending vertically upward
25 from said longitudinal strength member, said net support
26 structure being attached to said longitudinal strength
27 member, said net support structure having said capture net
28 attached thereto; and

29 (iv) a plurality of pontoons attached to said longitudinal
30 strength member and orientated perpendicular to said
31 longitudinal strength member, said pontoons for each of said
32 port security barrier modules keeping said port security
33 barrier system afloat in a seawater environment.

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1 Claim 22 (previously presented). The port security barrier
2 system of claim 21 wherein each of said plurality of mooring
3 buoys has one end of a mooring line connected thereto, said
4 mooring line having at least two branches, each of the branches
5 of said mooring line having an anchor connected thereto.

1 Claim 23 (previously presented). The port security barrier system
2 of claim 21 wherein said capture net has a mesh structure, said
3 mesh structure having a one foot square mesh size comprising
4 horizontal boat stopping members consisting of a 1.125 inch
5 diameter 12-Strand Braided nylon rope and vertical boat stopping
6 members consisting of 0.75 inch diameter 12-Plait nylon, the
7 horizontal boat stopping members of said capture net being
8 interlaced with the vertical boat stopping members of said
9 capture net to form the mesh structure of said capture net.

1 Claim 24 (previously presented). The port security barrier
2 system of claim 23 wherein said capture net has a height of
3 approximately eight feet and a width of approximately fifty two
4 feet.

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1 Claim 25 (previously presented). The port security barrier
2 system of claim 23 wherein said capture net is fabricated from
3 nylon to absorb energy from a waterborne craft which engages said
4 capture net, said waterborne craft when engaging said capture net
5 traveling at speeds of up to 52 knots and having a weight of
6 around 10,000 pounds.

7
8 Claim 26 (previously presented). The port security barrier
9 system of claim 21 wherein said plurality of pontoons comprise
10 three pontoons, a first and a second of said three pontoons being
11 positioned at each end of said longitudinal strength member and a
12 third of said three pontoons being position at the center of said
13 longitudinal strength member, the first and the second of said
14 three pontoons having an equal length, and the third of said
15 three pontoons having a substantially greater length than the
16 first and the second of said three pontoons.

1 Claim 27 (previously presented). The port security barrier
2 system of claim 21 wherein said longitudinal strength member
3 includes connector elements positioned at each end of said
4 longitudinal strength member, said connector elements allowing a

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5 user of said port security barrier system to connect each of said
6 port security barrier modules to adjacent port security barrier
7 modules.

1 Claim 28 (previously presented). The port security barrier
2 system of claim 27 wherein one of said port security barrier
3 modules operates as a gate, the connector elements of the one of
4 said port security barrier modules operating as said gate
5 allowing said user to open and close the one of said port
6 security barrier modules operating as said gate.

7
8 Claim 29 (previously presented). The port security barrier
9 system of claim 21 wherein said net support structure comprises:

10 first, second and third net support members attached
11 to said longitudinal strength member, said first,
12 second and third net support members extending
13 vertically upward from said longitudinal strength
14 member, said first net support member being positioned
15 at one end of said longitudinal strength member, said
16 second net support member being positioned at other end
17 of said longitudinal strength member and said third net
18 support member being positioned at the center of said

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19 longitudinal strength member;
20 a first angled support brace, said first angled support
21 brace having one end attached to the bottom end of said
22 first net support member and the other end attached
23 near the top end of said third net support member; and
24 a second angled support brace, said second angled
25 support brace having one end attached to the bottom end
26 of said second net support member and the other end
27 attached near the top end of said third net support
28 member.

1 Claim 30 (previously presented). The port security barrier
2 system of claim 29 further comprising a warning light located
3 near the top end of said third net support member and a light
4 support bracket attached to said net support member, said light
5 support bracket being mounted on said light support bracket.

1 Claim 31 (currently amended). The port security barrier system
2 of claim 29 further comprising:

3 a third angled support brace having one end attached to
4 the top end of said first net support member and the
5 other end attached to a first of said plurality of

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6 pontoons;

7 a fourth angled support brace having one end attached to

8 the top end of said second net support member and the

9 other end attached to a second of said plurality of

10 pontoons; and

11 a fifth angled support brace having one end attached to the

12 top end of said third net support member and the other

13 end attached to a third of said plurality of pontoons.